

Please enter amendment to specification
as shown. Ro

2/23/2005

IN THE SPECIFICATION:

Please amend the specification as follows:

On page 5, please replace paragraphs 1, 3 and 4 with the following amended paragraphs:

a¹ --~~An~~ Δn , by which the engine speed is increased, can be determined or can depend on the previously determined strain. The engine speed of the motor should not be attained immediately, but after a certain amount of time by increasing the normal operating idle speed to an increased idle speed. The increased idle speed is thus so high that the effective cooling of the motor is ensured, especially after this has been run on overload.—

a² --Fig. 1 shows the cycle of the engine speed, according to the invention. A specific operating moment of strain is first required by the motor up to a certain period of time T_1 during normal operating procedures. The motor is no longer strained as of the time period T_1 , which means that the motor only has to create the moment of idle running ML ($ML < M_1$). The moment of idle running ML is determined by the shortfall of pre-determined current, which the motor accepts. The motor runs on the operating idle speed n_1 , which is the same as or slightly higher than the operating speed, for a certain period of time ΔT . The idle time ΔT is thus dependent on the cycle of the moment of strain prior to the period of time T_1 . A preferred operational method, according to the invention, suggests that the value of the idle time ΔT depends on the maximum moment of strain, which occurs between the last cooling and the period of time T .--

--After the idle time ΔT has been completed, the engine speed of the motor at the period of time T_2 of the operating idle time n_1 is increased to a higher idle speed n_2 by value ~~An~~ Δn . Value ~~An~~ Δn , by which the engine speed is increased, can be pre-defined or can depend upon the maximum moment of strain that occurs between the last cooling and the period of time T_1 . The motor runs on the increased idle speed until the moment of strain M_2 is required above the moment of idle running ML ($M_2 > M_j$). The presence of the moment of strain M_2 is also determined according to the engine

speed by via measurements of the motor flow felt by the motor. In Fig. 1, the period of time T_3 requires that the motor provide a moment of strain M_2 , which is larger than the moment of idle running ML . The engine speed of the motor is thus immediately lowered to the chosen operating speed n_1 at this period of time.--

a3 On page 6, please replace paragraphs 2, 5 and 6 with the following amended paragraphs:

--When the motor is switched off and then switched on, the idle time $AT \Delta T$ is complete and the increased engine speed n_2 is then switched on after the tool has been put into operation. It is also possible to set the increased idle speed immediately after switching on the tool. The data required to determine the idle time $AT \Delta T$, i.e. the maximum moment of strain, can be saved on switching off the motor. --

a4 --The strain signal 9 takes on continual values, which are dependent on the strain on the motor. A time measuring device determines the idle time $AT \Delta T$ due to the strain signal 9. The idle time $AT \Delta T$ can thus be determine and depend on the maximum moment of strain, which occurs between the last cooling and the period of time T_1 , or which can depend on the middling strain value. This middling strain value is the middling moment of strain, which occurs between the last and current cooling phase. The cooling phase is the time period, in which the motor is run on the increased idle speed. The strain value is switched back after the increased idle speed has been reached.--

--The time measuring device starts a timer with the idle time $AT \Delta T$ as the starting point, when the idle running signal 8 is altered from '0' to '1'. This takes place at the period of time T_1 in Fig. 1. The time measuring device sends a trigger signal 7 to the regulator electronics 4 after the idle time $AT \Delta T$ has been completed. On receiving the trigger signal 7, the regulator electronics 4 increases the operating idle speed n_1 at the period of time T_1 by Δn to the increased idle speed n_2 . It is possible to do without a time delay so that the increased idle speed (n_2) can be attained immediately after the idle running has been—

Sub. a1 } An, by which the engine speed is increased, can be determined or can depend on the previously determined strain. The engine speed of the motor should not be attained immediately, but after a certain amount of time by increasing the normal operating idle speed to an increased idle speed. The increased idle speed is thus so high that the effective cooling of the motor is ensured, especially after this has been run on overload.

The increased idle speed should at the same time not exceed a certain level as there could be damage to the electric powered tool. The increased idle speed can, however, be interfering when operating the electric powered tool and for other specific applications. The engine speed is thus lowered from the increased idle speed to the operating idle speed without any time delay as soon as the motor requires a moment of strain above the idle running moment. The alteration to engine speed is thus carried out outside of the operational procedure and therefore ensures that stable operational procedures are possible at all time.

Sub a2 } Fig. 1 shows the cycle of the engine speed, according to the invention. A specific operating moment of strain is first required by the motor up to a certain period of time T_1 during normal operating procedures. The motor is no longer strained as of the time period T_1 , which means that the motor only has to create the moment of idle running M_L ($M_L < M_i$). The moment of idle running M_L is determined by the shortfall of pre-determined current, which the motor accepts. The motor runs on the operating idle speed n_1 , which is the same as or slightly higher than the operating speed, for a certain period of time AT . The idle time AT is thus dependent on the cycle of the moment of strain prior to the period of time T_1 . A preferred operational method, according to the invention, suggests that the value of the idle time AT depends on the maximum moment of strain, which occurs between the last cooling and the period of time T .

After the idle time AT has been completed, the engine speed of the motor at the period of time T_2 of the operating idle time n_1 is increased to a higher idle speed n_2 by value An . Value An , by which the engine speed is increased, can be pre-defined or can depend upon the maximum moment of strain that occurs between the last cooling and the period of time T_1 . The motor runs on the increased idle speed until the moment of strain M_2 is required above the moment of idle running M_L ($M_2 > M_L$). The presence of the moment of strain M_2 is also determined according to the engine speed by via measurements of the motor flow felt by the motor. In Fig. 1, the period of time T_3 requires that the motor provide a moment of strain M_2 , which is larger than the moment of idle running M_L . The engine speed of the motor is thus immediately lowered to the chosen operating speed n_1 at this period of time.

Immediate lowering of the engine speed ensures that the operational procedure is simple and comfortable. The increased engine speed is also lowered, should the electric powered tool be switched off or on again and the motor requires a turning moment above the idle running moment ML. The motor could have also been switched off at the period of time T_3 , according to Fig. 1.

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When the motor is switched off and then switched on, the idle time AT is complete and the increased engine speed n_2 is then switched on after the tool has been put into operation. It is also possible to set the increased idle speed immediately after switching on the tool. The data required to determine the idle time AT, i.e. the maximum moment of strain, can be saved on switching off the motor.

In Fig. 1, the motor could thus have been switched on again at the period of time T_1 .

This block circuit diagram as shown in Fig. 2, according to the operational procedure in the invention, presents the motor 1, the operating speed of which is set to a value using regulator electronics (4), by setting a regulatory signal 3. The regulator electronics 4 set the engine speed to pre-determined values, which are shown via a selector switch 2. The strain measuring device 6 measures the strain of the motor 1 and sends an idle running signal 8 and a strain signal 9. The idle running signal 8 accepts the value "1", when the motor 1 does not have to show a moment of strain, i.e. the motor is running on idle speed and the value "0", should the motor 1 have been speed.

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The strain signal 9 takes on continual values, which are dependent on the strain on the motor. A time measuring device determines the idle time AT due to the strain signal 9. The idle time AT can thus be determine and depend on the maximum moment of strain, which occurs between the last cooling and the period of time T_1 , or which can depend on the middling strain value. This middling strain value is the middling moment of strain, which occurs between the last and current cooling phase. The cooling phase is the time period, in which the motor is run on the increased idle speed. The strain value is switched back after the increased idle speed has been reached.

The time measuring device starts a timer with the idle time AT as the starting point, when the idle running signal 8 is altered from '0' to '1'. This takes place at the period of time T_1 in Fig. 1. The time measuring device sends a trigger signal 7 to the regulator electronics 4 after the idle time AT has been completed. On receiving the trigger signal 7, the regulator electronics 4 increases the operating idle speed n_1 at the period of time T_1 by Δn to the increased idle speed n_2 . It is possible to do without a time delay so that the increased idle speed (n_2) can be attained immediately after the idle running has been